

NUCLEAR DIVISION NEWS

UNION
CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 14

OAK RIDGE, TENNESSEE

Thursday, August 13, 1970

Nuclear Division U.S. Bond Drive In 'Full Swing'

The month-long U. S. Savings Bond campaign at Nuclear Division facilities in Oak Ridge is now in full swing, according to W. E. Williams, general chairman for the drive. While no firm figures on participation have been developed, Williams said there appears to be a great deal of interest in the campaign.

All employees have received "Payroll Savings Authorization Cards," together with a fact sheet pointing out the advantages of payroll savings.

Williams explained that participation in the payroll savings plan is automatic. Once an employee decides how much he wants to invest, the bonds start accumulating automatically. However, in the event of an emergency, E Bonds can be cashed readily at the bank.

Advantages Cited

In filling out the "Payroll Savings Authorization Card," employees need to indicate the amount of money they want to invest. Participation requires a minimum investment of 50 cents a week or two dollars a month.

In addition, each investor must indicate the dollar value of the bonds he wishes to purchase. Williams explained that while bonds come in numerous denominations, the most popular are \$25, \$50 and \$100 bonds.

Williams explains some of the many advantages a person gains through investing in U. S. Savings Bonds. The current interest rate is five percent if the bond is kept for five years, 10 months. In addition, savings bond interest is not subject to state or local income taxes.

'Lost' Bonds Replaced

Federal tax on E Bond interest may be declared annually or deferred, with advantages either way if the investor is saving either for a child's education or for his retirement.

The drive chairman pointed out that in the event bonds are lost, stolen or destroyed, they are replaced automatically by the U. S. Treasury. In addition, participants have the privilege of continuing to hold their E Bonds at interest for 10 years beyond maturity.

Working with Williams on the payroll savings drive are: L. A. Studinger, Oak Ridge Gaseous Diffusion Plant; Edward A. Pluhar, Oak Ridge Y-12 Plant; Hezz Stringfield, Oak Ridge National Laboratory; and Guy Tucker, General Staff.

New Carbide Dividend

The board of directors of Union Carbide Corporation has declared its 213th consecutive dividend. The amount is 50¢ a share on outstanding capital stock of the corporation, payable September 1, to stockholders of record at the close of business August 7, 1970.



DISCUSS SAVINGS BOND CAMPAIGN — Edward Foland, right, area Savings Bond representative for the U. S. Treasury, discusses promotion activities with W. E. Williams, general chairman of the Savings Bond campaign at the Nuclear Division plants. The month-long drive at the facilities started on August 1.

Carbide Sales Up 5%

Union Carbide's sales reached a new second-quarter high of \$769 million, an increase of 5 percent over the corresponding period of 1969, it was reported recently by Birny Mason, Jr., chairman of the board.

Earnings for the quarter amounted to \$42.0 million, equivalent to 70 cents a share. This is 16 percent lower than 1969 second-quarter earnings of \$50.2 million, or 83 cents a share. In the first quarter of 1970, Union Carbide reported earnings of \$42.6 million, equivalent to 70 cents a share.

Sales for the first six months were at a record total of \$1,495 million, up 6 percent from the corresponding 1969 figure of \$1,414 million. Earnings were \$84.6 million, or \$1.40 a share, 16 percent below the \$101.0 million, or \$1.67 a share, earned in the first half of 1969. Excluding a nonrecurring gain of 9 cents a share resulting from the sale of Neisler Laboratories, Inc. in the first quarter of 1969, 1970 earnings were 12 percent below those for the first six months of 1969.

International Sales Good

In commenting on the results, Mason said that strength in business outside of the United States continued to be an important contributor to the overall good sales performance. Sales in the second quarter attributable to international operations rose 16 percent above last year, whereas sales from United States and Puerto Rican operations rose only one percent. Mason noted that domestic sales had been affected by the economic downturn in this country. He added that if last year's second-quarter figures were adjusted to exclude sales from the corporation's Stellite and semiconductor businesses, which were sold at the end of 1969, domestic sales for the quarter would show a 4 percent gain.

Mason said that earnings continue to run below the level of last year, and below management expectations, principally because it has thus far not been possible to offset inflationary increases in costs of labor, purchased materi-

als, and transportation by improvements in operating performance.

5 Percent Growth Seen

Speaking of prospects for the remainder of the year, Mason said, "Although we cannot predict the outlook for general business conditions, we think it is reasonable to anticipate that Union Carbide's sales growth for the year as a whole will be about 5 percent. We expect that gains in operating efficiency, together with some recovery in selling prices of a number of products, will improve the trend of earnings during the remainder of 1970. Earlier in the year we said we thought we could exceed last year's earnings of \$3.08 a share. We continue to believe this result is achievable, but to accomplish it will require substantial gains in our operating performance as well as some improvement in the economic climate."



Dr. Seaborg

To most people the term "radioactive material" signifies something dangerous — something from which you'd better keep your distance if you're not trained and equipped to handle it. But while this may be generally true, there are more than one million people every year who drink an "atomic cocktail" — and do so under doctor's orders. What is an atomic cocktail? It is a colorless, odorless, tasteless mixture of water and iodine-131, a radioactive isotope, used to diagnose — and also to treat — thyroid disorders. This radioisotope is one of more than 30 being used successfully throughout the world to diagnose and treat a variety of human ail-

450 Donors Needed for Next Red Cross Bloodmobile Visit

With only a week to go before the next visit of the American Red Cross Bloodmobile, it's time for all new blood donors to call special number 483-0211 so that scheduling can be arranged.

Some 200 volunteers — nurses, Red Cross members, and just interested persons — have already made the preliminary arrangements necessary to keep the overall operation going smoothly. Donors should be able to give blood and leave within an hour.

The Bloodmobile will be at the Oak Ridge National Guard Armory, just off Oak Ridge Turnpike, on Wednesday, Aug. 19, from 4 to 10 p.m., and on Thursday, Aug. 20, from 11 a.m. to 5 p.m.

Special Hours

The Wednesday hours were arranged for the special convenience of area working people, particularly those at the Nuclear Division. The Bloodmobile staff makes regular rounds and normally stops at a site from 11 a.m. to 5 p.m., but has adjusted its normal working hours because of Oak Ridge's special needs.

Blood program officials emphasize that despite several successes in recent visits, donors are still needed to maintain the quota required to stay in the program.

Now's Your Chance

In this issue, the **Nuclear Division News** has included a questionnaire (page 6) that gives you the opportunity to confidentially evaluate the publication and give us an idea of what you'd like to see in a plant newspaper. Your signature is NOT required.

The whole idea of the readership survey is to develop a better paper for Nuclear Division employees. The more employees who participate, the more accurate the study will be.

Please fill out the questionnaire and drop it in any plant mail box. Your help will be appreciated.

The quota for the two-day visit is 450 pints of blood.

1800 Needed for Year

The previous Bloodmobile visits this year did well for initial efforts, but the total of volunteers is still far short of the overall goal—enough donors to maintain the program on the basis of one pint of blood per donor per year. So far nearly 1,000 Oak Ridge and Anderson County citizens have registered, and more than 800 were able to give blood. At this percentage, about 1250 more individual registrants are needed for the full year's quota of 1800 pints.

Of the 959 donor registrants in the county so far, 522—or about 54 percent—are Carbide employees.

ORGD Uranium Shipments Total 207,000 Pounds

The Oak Ridge Gaseous Diffusion Plant shipped approximately 207,000 pounds of enriched uranium during July for use in nuclear reactors.

The uranium, which was enriched at a charge of more than \$9.2 million, filled orders authorized under two AEC programs—Toll Enrichment and "Lease and Sale."

Under the Toll Enrichment Program, approximately \$8.8 million worth of separative work was performed for customers in Switzerland and West Germany, as well as in the States of Florida, Illinois, South Carolina and Virginia.

Customers are charged for the services required to separate from natural uranium the desired percentage of the uranium-235 isotope, which is the fissionable material used in nuclear reactors.

(Continued on Page 6)

Radioisotopes Help in Nuclear Medicine

By GLENN T. SEABORG

To most people the term "radioactive material" signifies something dangerous — something from which you'd better keep your distance if you're not trained and equipped to handle it. But

while this may be generally true, there are more than one million people every year who drink an "atomic cocktail" — and do so under doctor's orders. What is an atomic cocktail? It is a colorless, odorless, tasteless mixture of water and iodine-131, a radioactive isotope, used to diagnose — and also to treat — thyroid disorders. This radioisotope is one of more than 30 being used successfully throughout the world to diagnose and treat a variety of human ailments. A great many lives are saved and much suffering alleviated through the use of such medical isotopes. Today in the United States radioisotopes are used some eight million times every year in diagnostic tests and various methods of treatment.

Used Many Ways

Some isotopes are used in many ways. For example, iodine-131 can also help in the diagnosis of liver and kidney problems, can help locate brain tumors, and help doctors study blood volume and cardiac output. Phosphorus-32 is being used to treat leukemia and some types of bone cancer. Several radioisotopes — gallium-68, strontium-85, fluorine-18 and calcium-47—are used to detect bone diseases. Other medical uses of radioisotopes include yttrium-90 for pituitary gland therapy, gold-198 to offer relief in lung cancer and sodium-22 to diagnose circulatory disorders. These are only some of the many medical isotopes that are used internally—

injected into, or ingested by, the patients.

In another type of internal treatment radioactive sources are placed near or implanted directly into the diseased area. One of these treatments involves the use of a wire made of chromium-51. Since the radioactivity of the isotope diminishes to half in 27 days the wire can be left in the patient without fear of an overdose.

Blood Is Irradiated

A type of tumor irradiation from an external radioactive source, such as cobalt-60, has been very successful in treating some types of cancer. And in treating leukemia, we have even irradiated the patient's blood outside his body by causing it to flow through plastic tubes past a radioactive source to kill cancerous cells, and then back into his body.

These are only a few of many ways we are using radioactive materials medically to help diagnose and treat disease to help save human lives.

Pre-Coop Students at Half-Way Mark in Summer Program

By JAMES A. YOUNG

"Great". "Impressive". "Not the least bit homesick". "This is a friendly place". "I will be eager to return next year."

So goes the comment from the Nuclear Division's pre-cooperative students at the half-way mark in their summer quarter's work here. There are six pre-coops in Y-12, six in Oak Ridge Gaseous Diffusion Plant, five at Oak Ridge National Laboratory, and two at Paducah Gaseous Diffusion Plant.

The pilot program is specifically aimed at students who, because of financial limitations, might be unable to attend college. It has been coordinated with Howard University, Washington, D. C.; North Carolina Agricultural and Technical University, Greensboro; Southern University, Baton Rouge, La.; Tennessee State University, Nashville; and Tuskegee Institute, Tuskegee, Ala.

Following summer employment here, the pre-coops will enter schools next month and complete their freshman year. They will then enter the Cooperative Edu-

cation Program of alternate study and work periods as designed by their individual colleges.

'Warm, Friendly'

"Oak Ridge's people are warm and friendly," says Dorothy Nell Sims, one of the smallest and prettiest of the co-ops. Dorothy, a native of Dublin, Ga., expects to study civil engineering at Howard University. She graduated this Spring from Oconee High School, Dublin. One of six children, she likes to swim, play softball, and participate in any active outdoor sport.

Rooming with Sandra Hale, who is employed in Y-12, Dorothy finds the lack of transportation one of the few draw-backs in living here.

"I believe that working around engineers and being exposed to work related to that field will give me a headstart in college," Dorothy said.

Albert J. Boykins, a pre-medical engineer student at Southern University, thinks Oak Ridge is an "exquisite and rather sophisticated part of the country."

Albert, along with another of

the pre-coops, lives in a private home in Oak Ridge. His landlady, Mrs. Hearnie Williams, gives him the run of the house.

Honor Graduate

An honor graduate from Capitol High School, Baton Rouge, Albert will live at home during his time at Southern. He has three sisters still at home.

Swimming, basketball, volleyball, softball and other out-door activities fill his spare time.

"This is an excellent experience for a high school graduate," Albert believes.

The two pre-coops interviewed at ORGDP also expressed enthusiasm for the program.

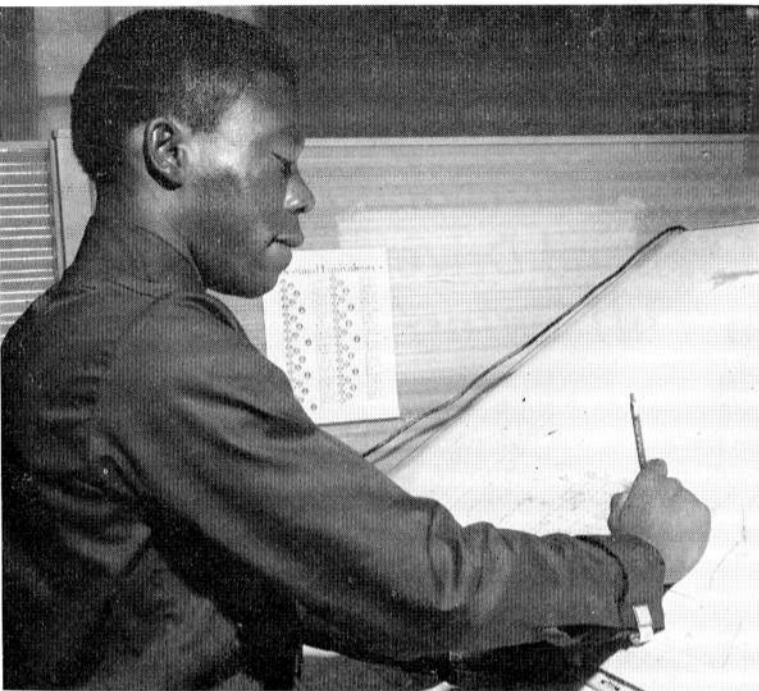
Steven Dukes, Union City, (about 18 miles south of Atlanta), Ga., will attend North Carolina A & T in Greensboro.

Basketball Star

Steven excels in basketball, and played guard on the state runners-up last year in Georgia, Fairburn High School.

He plays softball on the K-25 Devils team, and plays an alto sax. "I like music, but do not want to make it my career," he stated. He plans to study electrical engineering.

Charlie W. Betts, Jr. will attend Tuskegee Institute in Alabama, breaking family tradition. (He has a sister graduated from Florida A & M, and a brother who is a political science major there.)



PLANS M.E. CAREER—Albert J. Boykins, a native of Baton Rouge, will attend Southern University there to study mechanical engineering. Albert is one of the 19 pre-cooperative students now working in the Nuclear Division. He works in Y-12 this summer.



FEMALE ENGINEER—Dorothy Nell Sims plans a career in civil engineering. Dorothy is one of the two girls enrolled in the Nuclear Division's pre-cooperative program, a trial project to encourage Negro students to study the sciences and engineering. She is in Y-12 this summer.

Three-Letter Man

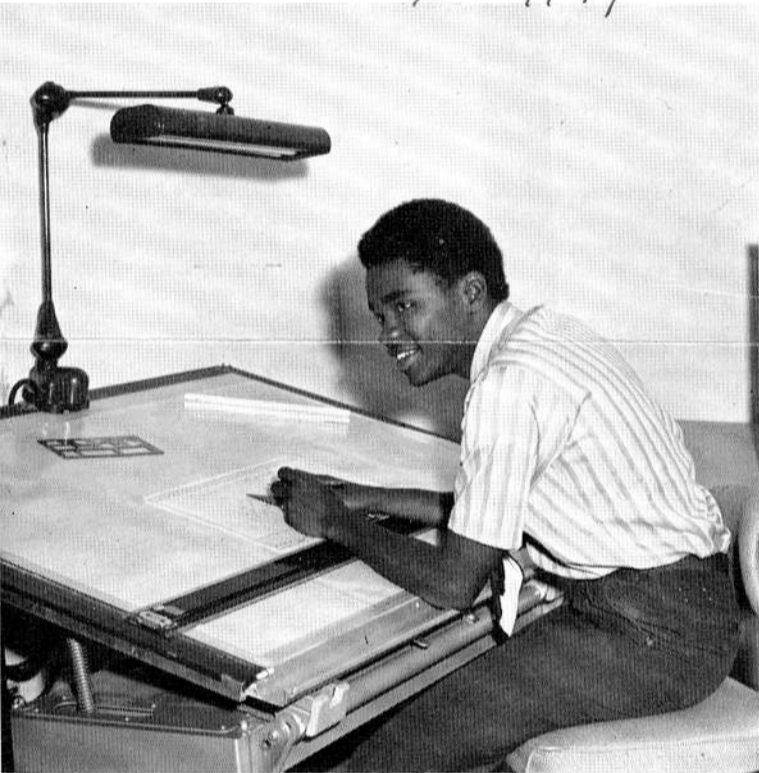
Charlie lives at Cambridge Hall, along with the majority of the Oak Ridge men in the program.

He earned three letters in high school in Corinth, Miss., and also found time to play the trumpet in the band.

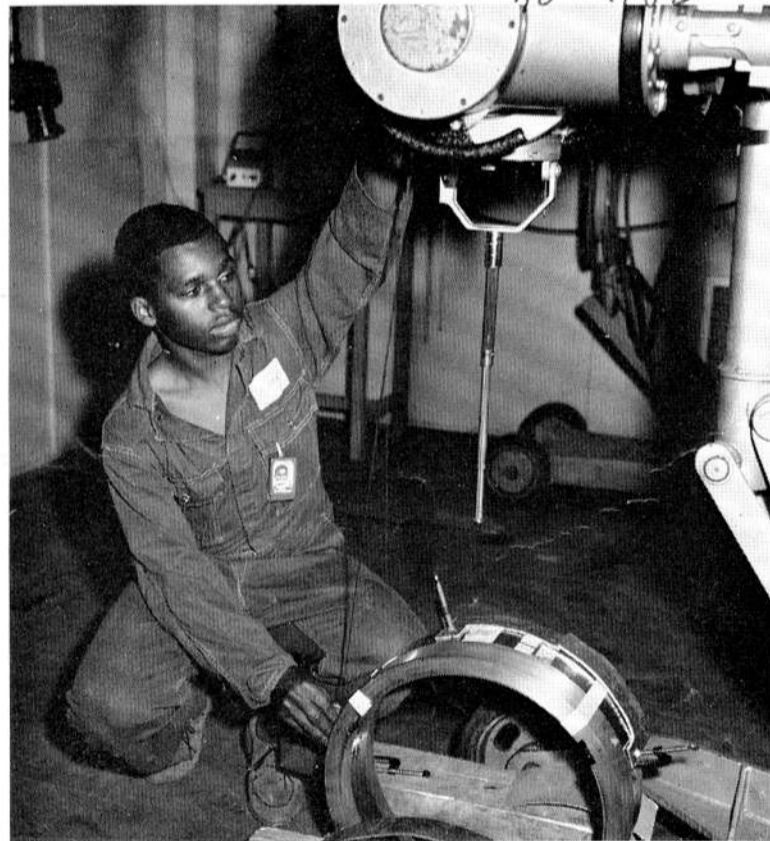
Charlie was born in Corinth. "The country here is different, with all these hills," he points out. "My country is a lot flatter than Tennessee."

One of the prime purposes of the pre-cooperative program is to encourage Negro students to pursue college studies in science and engineering.

Certainly the trial project could not have chosen brighter, more attractive students.



PREFERS DRAWING BOARD—Steven Dukes will attend North Carolina A & T University, Greensboro, for pre-electrical engineering studies. Steve plays an alto sax in a combo, and played all through high school in Union City, Ga. He is at Oak Ridge Gaseous Diffusion Plant this summer.



AN X-RAY MEASUREMENT—Charlie W. Betts, Jr. prepares a piece of equipment for an X-ray examination, at the Oak Ridge Gaseous Diffusion Plant. The pre-cooperative student enters Tuskegee Institute next month.

Nuclear Employees Buy Savings Bonds

The month-long U. S. Savings Bond drive is in full swing in the Nuclear Division plants here, as payroll deduction cards authorizing savings bonds deductions are being returned to bond committeemen throughout the area.

Y-12's Cashier and Travel Department, people who know all there is to know about money, report a 100 percent participation in the drive. They became the first department to report in with all employees in the Bond plan!

By request, the table showing how much you can accumulate over the years in various positions of deductions is run next door.

Whether it's an educational fund, or just a flat savings for a rainy day, U. S. Savings Bonds make good sense. Have you signed your deduction card yet?

NEWS

Published Bi-Weekly For The Employees Of
UNION CARBIDE CORPORATION



NUCLEAR DIVISION

Here's How Savings Bonds Grow

WEEKLY SAVINGS

Save Each Week	1 yr.	3 yrs.	5 yrs. 10 mos.	15 yrs. 10 mos.
\$ 1.25	\$ 66	\$ 205	\$ 429	\$ 1,539
2.50	131	412	861	3,038
3.75	197	618	1,295	4,638
5.00	263	825	1,725	6,185
6.25	328	1,031	2,160	7,737
7.50	395	1,237	2,592	9,285
12.50	657	2,063	4,321	15,483
18.75	987	3,095	6,486	23,234

MONTHLY SAVINGS

Save Each Month	1 yr.	3 yrs.	5 yrs. 10 mos.	15 yrs. 10 mos.
\$ 3.75	\$ 45	\$ 142	\$ 296	\$ 1,060
6.25	76	237	494	1,771
7.50	91	284	595	2,128
12.50	151	474	993	3,548
18.75	228	714	1,493	5,342
25.00	303	951	1,986	7,113
37.50	455	1,428	2,985	10,684
56.25	683	2,142	4,478	16,025
75.00	910	2,856	5,970	21,367

Alpha Five Processing and Inspection Name Beeler, Hitson, Lawson Foremen



Edward K. Beeler

Alpha Five Processing announces the recent promotion of Edward K. Beeler; and Dimensional Inspection names Philip R. Hitson and Carl D. Lawson inspection foremen.

Edward K. Beeler, a native of Knoxville, lives at Route 3, Lovell Rd., in the Concord community.

He served in the U. S. Army from 1950 until 1951, and worked with the E. B. Ellenburg Co. as a carpenter before coming here April 27, 1953.

Mrs. Beeler is the former Elizabeth Weeks.

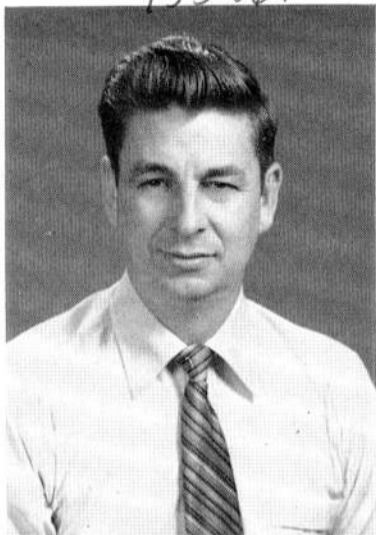
Philip R. Hitson

Philip R. Hitson was born in Corryton. He served in the U. S. Navy from 1952 until 1953. He came to Y-12 April 28, 1954.

The Hitsons live at Route 10, Bert Gardner Dr., Maryville. Mrs. Hitson is the former Norma Jackson. The couple has four daughters, Vicki, Donna, Connie and Wendy.

Carl D. Lawson

A native of Sneedville, Carl D. Lawson worked with the Clark Center Construction Co. before coming here September 23, 1957.



Philip R. Hitson



Carl D. Lawson

Mrs. Lawson is the former Ruth Moore, and they have a son Stephen and twin daughters, Karen and Sharon.

The Lawsons live at Route 2, Kingston.

A life you may spare—with a moment of care.



ANOTHER PATENT APPLICATION—C. R. Schmitt takes another patent application for his development "Method of Making Spherical Carbon or Metal Carbide Particles." Dr. J. M. Schreyer, right, superintendent of Chemistry Development, presents Schmitt his \$1 letter.



Mid-August welcomes another host of Y-12ers into select groups, as they observe important dates with Union Carbide Corporation. Congratulations.

25 YEARS

Jake F. Murray, Material Transfer and Packing, August 13.

Lawrence E. Baker, H-1 Foundry, August 13.

Dennis W. Davis, Alpha Five Processing, August 14.

Kyle C. Arnold, Chemical Services, August 14.

Eva K. Williams, Material Control, August 15.

Elmer H. Johnson, Alpha Five Processing, August 15.

Paris D. Pace, Research Services, August 16.

Jeanette A. McCown, Chemical Services, August 16.

Warren B. Tyree, General Can Fabrication Shop, August 17.

Elgin H. Bass, Salvage Department, August 17.

Mattie E. Anderson, Production Assay, August 19.

20 YEARS

James V. Haggard, Chemical Services, August 14.

Beecher B. Morrow, Casting Department, August 14.

Ernest V. Larmoyeux, Chemical Services, August 14.

George E. Isham, Alpha Five Assembly Area, August 14.

Thurman W. Noe, Buildings, Grounds and Maintenance Shops, August 15.

Boyd H. Hobby, Jr., Alpha Five East Shop, August 17.

Roy J. Johnson, Buildings, Grounds and Maintenance Shops, August 17.

George S. Wheeler, Area Five Maintenance, August 17.

Charles J. DeHart, Tool Grinding, August 18.

John O. Loy, Utilities Administration, August 18.

Burneth R. Cabage, General Machine Shop, August 18.

Wayne R. McClellan, Special Services, August 18.

Roy C. Byrd, Environmental Control Engineering, August 18.

Clarence J. Maddux, Jr., Area Five Maintenance, August 18.

15 YEARS

John Lewis, Jr., Materials Engineering Development, August 14.

James D. Griffin, Law Department, August 15.

William E. Wilson, Process Maintenance, August 17.

Hubert J. Russell, 9215 Rolling Department, August 21.

Olin G. Proffitt, Materials Transfer and Packing, August 26.

10 YEARS

Jimmy L. Murphy, Metallurgical Development, August 22.

Robert J. Mustin, Assembly Operations, August 25.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
222 Days Or
7,009,000 Man-Hours
(Unofficial Estimate)
Through August 9
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY

Top Safety Awards Received By Y-12, Laboratory Officials

The top safety awards of the National Safety Council, Union Carbide Corporation and the U. S. Atomic Energy Commission have been given to the Oak Ridge Y-12 Plant. In addition, the Oak Ridge National Laboratory has received the highest Carbide safety award.

The awards were presented recently at ceremonies in Y-12 with J. M. Case, plant superintendent, accepting them in behalf of the plant. Floyd Culler, deputy director of ORNL, accepted the award in behalf of the laboratory.

S. R. Sapirie, manager of Oak Ridge Operations, AEC, presented the commission's Award of Honor to Y-12 employees for having worked more than 9,000,000 hours from November, 1968, through August 23, 1969, without a disabling injury.

'Tops' Five Percent

Sapirie pointed to the outstanding record Y-12 had achieved over the years, explaining that in the last 17 years the facility had

received 18 AEC Safety Awards.

The National Safety Council Award was presented by Paul R. Vanstrum, vice president of the Nuclear Division. In making the presentation, Vanstrum explained that only about five percent of the industrial firms participating in the NSC program receive the award, which is given for a minimum of 3,000,000 man-hours without a disabling injury.

Roger F. Hibbs, division president, presented the Union Carbide Corporation Awards for Distinguished Safety Performance to Y-12 and ORNL.

'Combined Effort'

Hibbs explained that these facilities were the only ones within Union Carbide to ever receive the award two times. He said that this achievement was a credit to all employees and represented the combined effort of a great many people.

In accepting the awards in behalf of Y-12, Case said he was keenly aware of the fact that the Y-12 safety record represented effort by every employee in the facility.

Culler pointed to the great care which has been taken in the operation of the atomic energy facilities describing it as a "truly human and humane effort."

Close Call

Recently an employee in Y-12's Engineering Division narrowly escaped serious injuries when he went into a skid on Bear Creek Road and wrecked his vehicle.

Rain had just begun to fall and the asphalt surface of Bear Creek was very slippery. The Y-12er stated that as the car topped a small hill the rear wheels started sliding, and he lost control of the vehicle. It skidded off the road and down an embankment, shearing off several small bushes before coming to rest several feet from the road. Fortunately, the employee suffered only minor injuries.

The accident had the potential for a disabling or even a fatal injury.

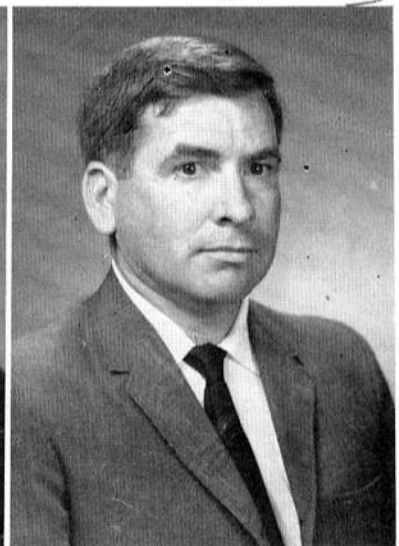
The Safety Department warns that just at the beginning of rain is the most dangerous time as far as our roads are concerned. The light film of dust and oil provides a perfect agent for the water to become a slippery death trap.

Bowling Set

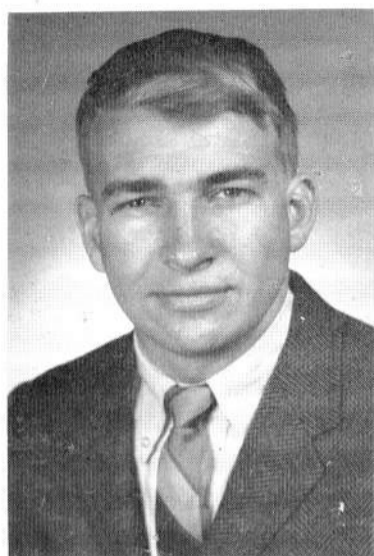
With Summer on the wing, and September just around the next stop, the Recreation Department has already announced opening dates for the bowling leagues.

The Classic League, 16-team strong, will throw out its first balls Thursday, September 3. The Mixed League, the only co-educational crowd of bowlers here, will fire their opening guns Wednesday, September 9; while the C League, 12-team strong, will open Monday, September 14.

The Starlite League is organized, but sitting on hold right now. They bowl at the Starlite Lanes, Cumberland Estates, Knoxville.



NEWLY REGISTERED PROFESSIONAL ENGINEERS — Wayne C. Collette, and Charles H. Curtis, right, were recently notified of their acceptance as registered professional engineers. Both engineers are in Y-12's Mechanical Manufacturing Design. Collette, his wife, Mary Lou, and their two children, live at 5008 Mountain Crest Drive, Knoxville. Curtis and his wife, Eleanor and two children, live in Kingston.

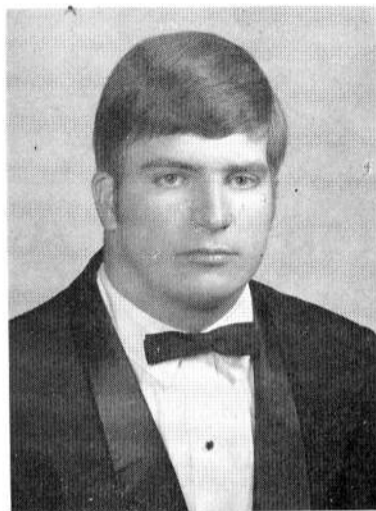


Ronald Brown

Brothers Attending TTU at Same Time

S. R. Brown, Tool Grinding, has two sons attending Tennessee Technological University. They are in college together for the first time.

Ronald, the oldest, is head football coach at Oliver Springs High School. He is at TTU to obtain his master's degree in education. He attended Hiwassee College on a basketball scholarship and



Douglas Brown

graduated from The University of Tennessee with a B.S. in education, and is a veteran of the U. S. Air Force. He is married to the former Joey Woods, daughter of Lige Woods, a retired guard. They have a small daughter, Jill.

Douglas, the younger of the two Brown sons, also is in pursuit of his master's degree. He is attending TTU on a football scholarship there, and has one more year of eligibility. He was red-shirted last year because of a serious eye injury.

The Browns live at Oliver Springs.



WEDDINGS

DAWSON-SCOTT

Miss Carolyn Marie Brashears became the bride of Mr. Woodrow Scott Dawson Saturday, May 29. The First United Methodist Church at Murfreesboro was the scene of the rites, with the Reverend Phillip M. Ritter officiating.

The bride is the daughter of Mr. and Mrs. Arvil Lee Brashears, Route 2, Oliver Springs (the mother is in Y-12's Chemical Services); and the parents of the groom are Mr. and Mrs. Roz Dawson, Murfreesboro.

For her wedding the bride wore a gown of white polyester knit trimmed with a yoke of white daisies and lace. Her headdress was a matching pillbox edged in lace and covered by a veil of white bridal illusion. She carried a white Bible with an orchid surrounded by white daisies and tied with a ribbon.

Miss Leilia Kay Brashears was her sister's attendant.

Elliot Dawson was his brother's best man, and Steve Carter, Murfreesboro, was an usher.

A reception honored the couple in the church educational building, immediately following the ceremony.

The couple is at home in Murfreesboro where both are seniors at Middle Tennessee State University.



Mr. and Mrs. Woodrow Scott Dawson

Loupe-Phillips Extend Lead at South Hills

The Loupe-Phillips team head the South Hills Golf League with a comfortable nine point lead. They downed the Oakwood-Leete pair last week for six, the Cabe-Jones pair the week before for five big points.

J. H. Loupe carded a 42 for last week's low.

League standings follow:

Team	W	L
Loupe-Phillips	54	12
White-Gallman	45	21
Parker-Parrott	44	22
Sise-Dean	42	24
Oakwood-Leete	35	31
Cogswell-Jones	33	33
Collins-Clabough	31	35
Bell-Gresham	29	37
Pappas-Joest	24	42
Ellis-Riding	22	44
Cabe-Jones	21	45
Huber-Parker	16	50

Wetzel team took the helm of leadership in the weekly competition, only a stroke out front.

League standings follow:

Team	W	L
Babb-Baker	45	21
Alvey-Pryson	44	22
Luck-Hatmaker	41	25
J. Brown-J. Sherrod	40	26
Green-McDonald	39	27
Stewart-Grubb	38	28
Rogers-Verner	37	29
George-Strike	37	29
Crowder-Buxton	34	32
Riggs-McElroy	28	38
Winstead-Wyrick	28	38
Nixdorf-Holdaway	26	40
S. Thomason-R. Thomason	9	57

Presence of mind means absence of accidents.



Will join car pool from 4309 Lamour Drive, West Knoxville, to East Portal, straight day. Lloyd Krohn, plant phone 3-5226, home phone Knoxville 584-7652.

Ride wanted from Upchurch Road, Inskip Area, Knoxville, to Bear Creek Portal, straight day. J. A. Walden, plant phone 3-5156, home phone Knoxville 689-5379.

Ride wanted from Emory Road, off Oak Ridge Highway, to Bear Creek Portal, H Shift. David S. Brock, plant phone 3-7728, or 3-7729.

Ride wanted from Wilde Acres, near Edgemoor, to North or Central Portal, straight day. Ann Rackley, plant phone 3-7283, home phone Clinton 457-0399.

Ride wanted from Jackson Square area, Oak Ridge, to North or East Portal, straight day. Eric Hirst, plant phone 3-7841, home phone Oak Ridge 483-1535.

Ride wanted from Oklahoma Avenue, Oak Ridge, to West Portal, straight day. Al Waraksa, plant phone 3-5244, home phone Oak Ridge 483-6826.

Ride wanted from Tacora Hills, between Oak Ridge and Clinton to West or Central Portal, straight day. Brenda Boyd, plant phone 3-5244, home phone Clinton 457-9326.

Ride wanted, riders, or will join car pool, from Cherry Street, Knoxville to Central Portal, H Shift. H. A. Hanna, plant phone 3-5283, home phone Knoxville 522-0587.

Ride wanted from Cumberland Estates section, Knoxville, to East or North Portal, beginning August 24, straight day. Lennis E. Bear-din, Jr., home phone Knoxville 588-8378.

Ride wanted from vicinity of Emory Road, Clinton Highway, Powell section, to North Portal, straight day. Vickie Sise, plant phone 3-7841, home phone Powell 947-6592.

Ride wanted from Friendsville to North Portal, straight day. T. H. Johnston, plant phone 3-5415, home phone Friendsville 995-2459.

Ride wanted from Buttermilk Road, Concord, to Biology or North Portal, straight day. Starting September 14. Jean Radovich, plant phone 3-7429, home phone Knoxville 584-6325.

Henderson-Stanton in SW Point Early Lead

Carl Pelfrey opened the second half of the Southwest Point Golf League with a swift score of 34, tied with W. E. Briscoe. Three teams of the league took sweeping wins the first week from opponents.

In the second week Bill Mee carded a 35 low score, as the Henderson-Stanton pair took another sweep to climb atop the heap.

League standings follow:

Team	W	L
Henderson-Stanton	12	0
Mee-Wright	10	2
Bolt-Pelfrey	7	5
Plemons-Roberts	6	6
Stark-Wilkey	6	6
Boyd-Bush	3	9
Briscoe-Williams	2	10
Jones-Morgan	2	10

GARGANTUAN APPETITE

Some 5,000 textile mills in the United States, in the process of producing some 15 billion square yards of fabric each year, use massive amounts of chemicals and chemical products — man-made fibers, dyes, bleaches, pigments, solvents and hundreds of others.

Carl Dorr 'Hot-Cards' Whittles Springs Tournament with a Low One-Under-Par

Medal honors went to Carl Dorr in Y-12's fourth golf tournament of the season, this time at Whittle Springs Course, Knoxville. Dorr fired a one-under-par 69 in a field of golfers that turned in "prototype" scores. (A total of 11 greensmen scored in the 70's without placing in the winners' listings!)

Other scratch winners in the first division saw Benny Crass score 72; George Heins, 73; and W. T. Arrowood, 74.

Handicap lows went to Joe Dick, 64; Virgil Lovett, 66; Tom Reed, 67; and Jim Pugh, 68.

R. E. Plemons, Jim George and Gary Williams, along with H. B. Presley racked up 14 pars.

A total of 184 Y-12ers turned up to see Dorr post an eagle on hole number three (482 yards); a bird on number six (185 yards); and on the back nine the Y-12 ace scored a bird on 13 (a 311 yard hole).

Division II

In the second flight, Bill Sise walked away with honors, carding a low 74 score. He was followed by J. D. Brown, 75; Floyd Ludwig, 79; and J. C. Thompson, Jr., 80.

In handicap count, it was Ed Sise (father to scratch-winner Bill) with 63; Allen True, 65; J. H. Wiley and Harold Alevo, both with 67.

W. L. Simmons tallied 11 pars; Dale Phillips and Fred Wetzel counted 10 on their cards.

Division III

Howard Nobles was peer in flight three, scoring an 81 in scratch counting. He was closely followed by old-pro Roy Roberts and Conrad Strike, both with 84. W. E. Briscoe rounded out the third flight with an 85 score.

Handicap honors were gleaned by R. J. Mustin, Joe Pryor and A. M. Wilkey, who tied for first place honors, all with 65. Gary Ellis and R. L. Dagley came in with 70 handicap scoring.

Harold Bell, Joel Garber, Bill Forrester, and Richard Nixdorf parred six big holes on the rolling Knox greens.

Division IV

G. R. Bentley and Paul Trebilcox tied for honors in the last division, scoring 88 each. They were followed by R. S. Quinn, 689; and O. K. Bush, 94.

Handicap lows were registered by K. X. Mauldin, 61; A. L. Coffey, 65; Fred Marshall, 65; and C. R. Elliott, 69.

Jay Winget parred four holes; and a big scramble for second most pars saw David Lewis, J. L. Lawhorn, R. L. Braden, J. D. Griffin, B. F. Hendrickson, C. R. Stewart, and W. A. Freels all pick up one each.

August's tournament, and the final one of the busy 1970 summer, is scheduled at the lakeside course at Melton Hill, across the 'crik' from the Clinton-Oak Ridge Highway.

Entries will close next Wednesday, August 19 at 4:30 p.m. A coupon appears at the bottom for the convenience of Y-12 tee-men.

Wins Army Commission



Lieutenant and Mrs. McCowan

Herbert B. McCowan, Jr., son of Mr. and Mrs. H. B. McCowan, was commissioned a second lieutenant in the U. S. Army recently at Fort Benning, Ga.

He is a 1964 graduate of Oak Ridge High School and received his B.A. degree in fine arts at East Tennessee State University in 1968.

Lt. McCowan is now a weapons instructor at Fort Benning.

He is married to the former Vicki Carol Bowers of Elizabethton.

Parents of both attended the ceremonies. Lt. McCowan's father is in Y-12's Tool Grinding Department.

PLASTIC 'BALLOON' BANDAGE

A plastic sleeve that can be slipped over an injured arm or leg, zipped shut, and inflated by blowing air into it is one of the latest products of chemical progress. Pressure inside the bandage controls the bleeding — and the clear plastic permits easy inspection of the wound.

Tee-Off Time Application For Melton Hill Golf Tournament

Clinton, Tenn.

Saturday, August 22

Foursome

_____, Leader

Leader's office phone _____

Home phone _____

Tee-off Time Preferred _____

Fill out completely and return to the Recreation Office, Building 9711-5. Deadline for entering is 4:30 p.m. Wednesday, August 19. Tee-off times will be drawn the next day, Thursday, August 20 at 8 a.m.

Babb-Baker Seize Lead Melton Hill Fairways

Y-12's answer to Arnie you-know-who, Carl Dorr, recently fired a 31 at Melton Hill, with five birdies! The team of Alvey-Dorr moved into first place, only to lose it last week.

The team of Babb and Wetzel had eagles on the ninth hole July 28.

Last week the Babb-Baker-

THE CARBIDE COURIER

Thursday, August 13, 1970

Page 3

R. P. Milford Appointed Unit Chairman With Institute of Chemical Engineers



R. P. Milford

R. P. Milford, a newcomer to ORGDP, was recently appointed membership chairman of the Nuclear Engineering Division, American Institute of Chemical Engineers. He was chairman of the Knoxville-Oak Ridge Section in 1968. He is also a member of the American Chemical Society and the American Society for Metals.

Milford comes to us from the Chemical Technology Division, ORNL, where he was Project Director of the Fluidized-Bed Volatility Pilot Plant, followed by a two-year loan period with Y-12 Engineering. He is a "pioneer" Oak Ridger, coming in 1944 as a member of the Special Engineering Detachment, Corp of Engineers, and working at the Y-12 Plant. Prior to coming to Oak Ridge he had been associated with Du Pont and Maytag.

Milford has a bachelor's degree in chemical engineering from Iowa State University of Science and Technology. He is presently a member of the Chemical Engineering group, Process Design Section, Engineering Division at ORGDP.

He is married to the former Mary Louise Duthie, and they have four children. The Milfords live on Sheffield Drive, Knoxville.

Brummitt, Long-Time Carbide Employee, Dies

Leon Brummitt, lubrication man in the Fabrication and Maintenance Division, died July 21 at Bacon Hospital in Loudon. He had been employed here since March 3, 1945. Before coming with us he had worked for TVA and farmed.

Brummitt was a native of Kingston. Immediate survivors include his wife, Espa Tinnell Brummitt; three daughters, Virginia Hatley and Linda Gail Brummitt, Lenoir City, and Charlotte Ann Arden, Johnson City, Kans.; and a foster son, Johnny Ray Roberts, Middletown, Ohio.

The Brummitt residence is in the Highland Park Community (Route 4), Lenoir City.

THE CARBIDE COURIER

Published Biweekly

Editor H. J. Mayberry
K-1002 Building, Tel. 3-3097

FUEL FROM WATER

If controlled nuclear fusion is successfully achieved, heavy hydrogen in the oceans would become the fuel for electricity generating plants—an energy resource equal to 500 Pacific Oceans filled with high-grade petroleum.

SAFETY SCOREBOARD

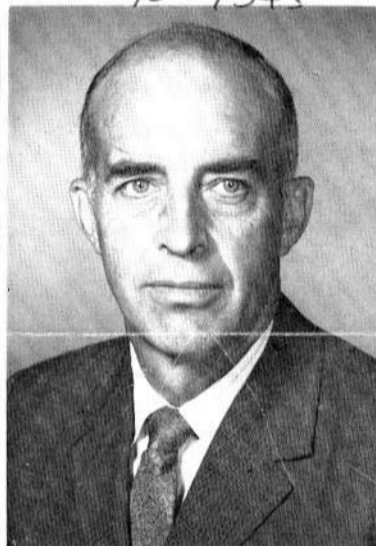
OUR PLANT
Has Operated
784,000 Safe Hours
Through August 6

Since last disabling injury on June 11



MAIL IMPROVEMENT MEETING — One of the 11 groups at K-25 that attended the sessions devoted to the improvement of mail practices within the Federal Government and its agencies are seen in conference.

L. O. Bacon is Promoted To Maintenance Engineer



L. O. Bacon

Lemuel O. Bacon has been promoted to a maintenance engineer in the Fabrication and Maintenance Division. He has been employed here since October, 1945, and recently was transferred from the Engineering Division. Prior to coming with Union Carbide, he had served three and one-half years in the U. S. Navy Air Corps. Bacon is a native of Kingston. He attended Tennessee Wesleyan College. Mrs. Bacon is the former Virginia Rose, also from Kingston. They have a son, Steve, who works for South Central Bell in Morristown. The Bacons live on Route 1, Kingston.

Bacon's prime outside interest is flying, a carryover from his time in the Navy. He holds a commercial pilot's license and has his own plane, a Cessna 180. Several flying enthusiasts have gone together to build their own air strip near Kingston. Bacon built his own hangar with the addition of a chalet, or summer cottage, on top of the hangar. When he is not engaged in flying or its related activities, Bacon plays golf.

Mail Improvement Program Attended by 228 at ORGDP

Responding to a recent Presidential request to improve mail practices within the Federal Government and its agencies, the Nuclear Division has developed a Mail Improvement Program (MIP).

Eleven meetings — nine at ORGDP, two at Cheyenne Hall — were held for secretaries, file custodians, and other clerical personnel who prepare material for mailing and who are responsible for dispatching and receiving classified mail.

The materials used in these meetings consisted of a film, **Prepare with Care**, and a tape/slide presentation on mail preparation. The material was prepared along guidelines developed by the United States Post Office Department. The film shows the automated mail processing equipment and details some of the problems which arise when mail is prepared improperly. Emphasis is placed on thickness of mail, selection of the right envelope, nonmachinable items, and approved sizes of envelopes. One part of the three-part tape/slide presentation deals with the preparation and handling of Nuclear Division mail exclusively.

The ORGDP meetings were conducted by C. H. Martin and R. R. Tippy, Mail Department, and Lorene Friar and J. C. Young,

Industrial Relations Division. Tippy also presented a tape/slide program which dealt with procedural changes involving classified interplant mail. Also on hand to assist in the discussion sessions were W. C. Myers, Plant Records, and F. H. Anderson, Plant Security.

Guests from the Atomic Energy Commission, Division of Technical Information Extension (DTIE) and the U. S. Post Office Department were present. The eleven meetings were attended by 228 employees.

Lab Notes

Wayne Neff, Chemical Analysis Department, is gaining recognition as a developer of champions. He recently coached the Rebels to a baseball championship in the Inskip-Norwood Buddy League. After dominating the National League with a 13-1 record, his team continued its winning ways by defeating the Cubs of the American League by the score of 12-4 for the Inskip-Norwood championship.

This is the second title this season for teams coached by Wayne. He also coached the West Haven Hornets to a basketball championship last winter in the West Haven Buddy League.



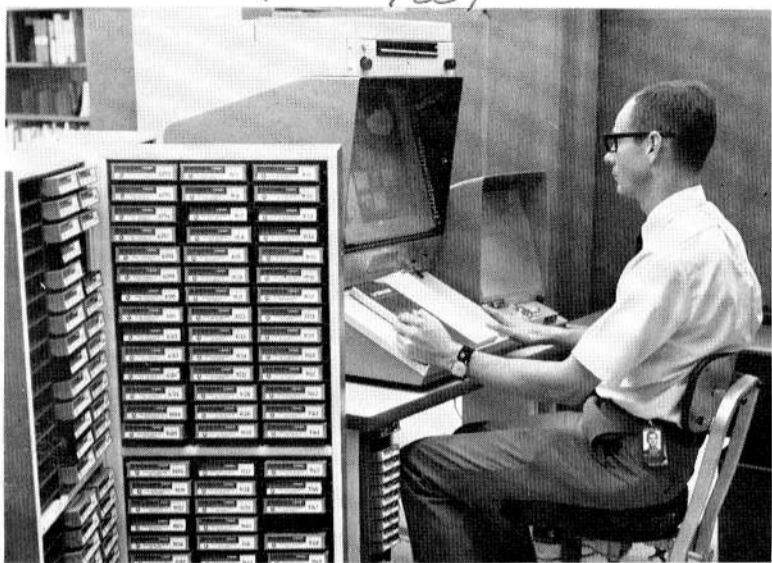
ACHIEVEMENT AWARDS — More 'graduates' from the Helper Training Program are seen receiving their plaques. From left are L. A. Studinger, superintendent of the Fabrication and Maintenance Division, J. L. Douglas, welder; and B. A. Guy, carpenter; and W. E. Rooks, superintendent of Field Maintenance and chairman of the F & M Training Advisory Group.



Ride wanted from vicinity of Woodland School to Administration Area, 7:45 to 4:15. Anita Jordan, 3-3319, home, 483-1524.



"TO HELP HOLD THINGS TOGETHER." These were Oral Rinehart's words as he presented his successor, Clyde Hopkins, a huge paper clip at Rinehart's retirement party. Mrs. Rinehart and Clark Center, who served as Master of Ceremonies, enjoy the merriment.



OBTAINING CATALOG DATA—John Arrowood, operator, obtains catalog data from the VSMF engineering design file.

ORGDP Library Acquires New Visual Search Microfilm Record

The ORGDP Library has acquired a Visual Search Microfilm File (VSMF) for design engineering and building products. These two files consist of 414 cartridges of 16-mm microfilm representing about 750,000 pages of catalog data. The files are kept up-to-date by monthly revisions and revisions and replacement of obsolete cartridges and index cassettes.

A user can find catalog data in either file by placing an index cassette on a satellite viewer. The index identifies the cartridge and frame numbers for the item sought. By placing the cartridge in a reader-printer and advancing to the proper frame number, the desired catalog data can be found. Indexes offer file access by manufacturer, product, performance parameters, and brand name. Copies of the catalog pages may be produced if desired.

The files provide catalog data on thousands of items, from A-couplings to Zoom lenses, that engineers and scientists might use in design work.

To illustrate the procedure for obtaining catalog data, a common everyday item such as a tape rule can be found in the design engineering file by first consulting the VSMF Product Index book. The heading, "Rule, Measuring" or "Ruler, Measuring" refers us to locator code F-43-23 in the Locator Index cassette.

By placing the Locator Index cassette on the satellite viewer and advancing the film to F-43-23, we find that in cartridge number 4096, beginning on frame number 1297, data on rules and scales can be found. Cartridge number 4096 is selected from the rack, inserted in the reader-printer, and the film advanced to frame number 1297. By scanning the frames between 1297 and 1453, we are able to obtain manufacturers and other catalog data on several types of tape rules.

The VSMF is available for use and is presently located in the Plant Library pending refurbishment of the Engineering Catalog Files area in Building K-1001.

Preretirement Plan Reviewed by Betts At Association Meet

R. J. Betts, Superintendent of Industrial Relations at ORGDP, was the speaker at the July meeting of the Oak Ridge Chapter of the American Association of Retired Persons (AARP). Betts reviewed Union Carbide's preretirement program and some of the problems observed in the program.

Perhaps the biggest problem in preretirement counseling, he explained, is to convince employees that the counselor is not trying to pry into their personal affairs. Betts said the prime purpose of counseling is to motivate employees to plan in advance of retirement.

Betts advised the group members to remain active following retirement — not just "wither on the vine." He also cited two specific challenges that AARP members might consider as a group project. The first could be finding and developing either full- or part-time jobs for retirees. The other is encouraging the development of adequate camper-trailer parking facilities for the rapidly increasing number of "sun followers" — the older people that go south for the winter then migrate back north for the summer months.

AARP meets the third Thursday of each month at 1:30 p.m. in the Ridge Recreation Hall in Jackson Square.



NEW WISE OWL—A. W. Osborne, center, accompanied by his foreman, J. H. Williams, left, receives his membership plaque from L. A. Studinger, superintendent of Fabrication and Maintenance, right. In addition to the plaque showing membership in the Wise Owl Club, Osborne received an attractive coat lapel button which he plans to wear to identify him as a Wise Owl.

Masonry Chip Cracks Safety Glasses To Qualify Osborne for Wise Owl Club

A. W. (Andy) Osborne, brick-mason in the Buildings and Grounds Department, Fabrication and Maintenance Division, has been awarded membership in the Wise Owl Club of Union Carbide Nuclear Division, Oak Ridge Gaseous Diffusion Plant.

The Wise Owl Club is a unique group of industrial workers and students who have cheated blindness through wearing eye protection at the time their vision was in danger.

Approval of membership for Osborne by the National Society for the Prevention of Blindness, Inc., sponsor of the Wise Owl Safety Program, was based on his

experience of February 2, 1970, when he was removing lining from a large tank in Building 1401 and the piece of masonry material struck him with enough force to break the left lens of his safety glasses. He did not sustain an injury.

L. A. Studinger, Superintendent of F&M, and J. H. Williams, Osborne's foreman, welcomed Osborne to the ranks of those who, through their own experience and foresight, have proved that use of eye protection can prevent eye damage and loss of sight. Studinger said: "Along with your family and your co-workers, we join you in giving thanks that your vision was saved."

Frank Copeland and George Wylie Split Honors with 72 Par Scores at Melton Hill

Frank Copeland and George Wylie shared medalist honors in the fourth K-25 golf tournament of the season at the Melton Hill Golf and Country Club on July 25. Both had scratch scores of par 72.

Joe Tuggle had the best scratch score in the second division with a 77 and John Cobb's net 68 was the best handicap score.

Richard Abbott shot an 89 to win the scratch honors in the third division and Jim McKinley

had the best handicap score with a net 63.

DIVISION I

Front Nine	Back Nine
H. F. Cornett 30	F. Copeland 31
John Boggs 33	Bob Lynn 35
Lee Bradley 33	H. Creswell 36
J. C. Horton 33	J. F. Kirchler 36
R. E. Nier 33	W. L. McMahan 36
Ed Powell 33	R. E. Nier 36
E. V. Bogle 34	George Wylie 36
George Wylie 34	R. L. Bedwell 37
G. B. Borroughs 35	John Boggs 37
F. Copeland 35	C. S. Patton 37
J. F. Kirchler 35	R. M. Schilling 37
Bob Lynn 35	
W. L. McMahan 35	
R. M. Schilling 35	
Jim Winters 35	

No. 5 Hole-In-One

George Wylie 5 ft. 11 in.

Pete Leslie 9 ft. 11 in.

No. 11 Hole-In-One

Ted Kwashoski 15 ft. 3 in.

Ed Powell 17 ft. 2 in.

DIVISION II

Front Nine	Back Nine
D. H. Zim'man 29	Joe Tuggle 30
E. T. Strunk 30	John Cobb 33
D. M. Papke 33	G. H. Job 34
Joe Tuggle 33	W. C. Myers 35
J. B. Wilhoit 33	R. Napier 36
S. B. Harris 34	Ted McKenzie 37
Bob Orrison 34	J. B. Wilhoit 37
L. R. Williams 34	Sam Woodfin 37
G. B. Brooks 35	R. A. Carter 38
R. A. Carter 35	H. W. Phillips 38
John Cobb 35	Tom Douglass 38
A. L. Joiner 35	
D. R. Lawrence 35	
R. O. Meyers 35	
W. C. Myers 35	

No. 5 Hole-In-One

A. L. Joiner 5 ft. 5 in.

Jim Fourman 7 ft. 1 in.

No. 11 Hole-In-One

Carol Easler 3 ft. 7 in.

Sam Woodfin 9 ft. 11 in.

DIVISION III

Front Nine	Back Nine
Jim Stout 30	J. I. McKinley 28
Jerry Williams 30	R. R. Abbott 33
R. J. Easterday 32	T. A. Angelelli 33
G. W. Lay 32	Carl Peterson 33
L. J. Davis 33	A. M. Foster 36
A. M. Foster 33	D. L. Klebenow 36
R. R. Abbott 34	Jim Stout 36
Claude Bridges 34	Lyle Hensley 36
D. R. Raines 34	Claude Bridges 37
D. L. Klebenow 35	L. J. Davis 37
E. D. Legg 35	E. D. Legg 37
J. I. McKinley 35	
Art Rice 35	
J. A. Tindall 35	

No. 5 Hole-In-One

Richard Abbott 12 ft. 5 in.

P. K. Sherrill 14 ft. 1 in.

No. 11 Hole-In-One

T. A. Angelelli 14 ft. 1 in.

Jesse Bullock Wins Air Force Squadron Maintenance Honors

Sgt. Jesse R. Bullock, son of G. E. Bullock of the Fire and Guard Department, was named "Outstanding Maintenance Man of the Year" in the 36th Tactical Fighter Squadron of the U. S. Air Force.

Young Bullock entered the Air Force in February, 1961, and intends to make a career in the Air Force. He is now stationed in Seoul, Korea. Since his enlistment, he has served more than seven years in the Orient, including one year in Thailand and about four years in Japan.

The commendation that Bullock received from the commanding officer of the squadron reads as follows:

"Congratulations on being selected as the 36th Tactical Fighter Squadron Outstanding Maintenance Man of the Year. This is quite an honor for you, and rightly so for it recognizes the diligence and alacrity with which you have accomplished your duties.

"The responsibilities of the maintenance men are many and varied, but they all are directed toward maintaining the maximum number of our aircraft in combat ready status at all times. Upon your shoulders the mission of the Wing finally rests. Without well



Sgt. Jesse R. Bullock

maintained aircraft, it would be impossible indeed to meet our commitments. You have contributed immeasurably to our mission capability by your outstanding accomplishments."

Final Tournament

The final golf tournament of the current season will be held on the Whittle Springs Golf Course in Knoxville on Saturday, August 29. Starting times may be obtained from the Recreation Office on August 24.

Golfers are reminded to pay their greens fees at the pro shop before they come down to the first tee to begin play.



MARRIAGE — Marilyn Brenda Cheek became the bride of David Lewallen Stansberry, Operations Division, June 6, at the First Baptist Church in Oak Ridge. The Stansberrys are living at 610 Michigan Ave., Oak Ridge.

Eileen Walbrecht Earns CPS Rating

Eileen Walbrecht, secretary to J. M. Anderson in the Materials Management Department, Finance and Materials Division, was recently notified that she is now a Certified Professional Secretary. In order to qualify as a CPS, candidates must pass a comprehensive examination covering such subjects as personal adjustments and human relations, business law, business administration, secretarial accounting, and secretarial skills and procedures.

The Certified Professional Secretaries program is sponsored by the National Secretaries Association of which Mrs. Walbrecht is a member. There are only 5053 CPS's in the United States.

Mrs. Walbrecht has been with Carbide since August, 1961, first at Y-12 then later at ORNL. She transferred to ORGDP in August, 1965. She came to Oak Ridge as



Eileen Walbrecht

a child and attended public schools here.

She is married to Tommy Walbrecht and they have a daughter, Ginger, 6. The Walbrechts live at 107 Thayer Lane, Oak Ridge. Mrs. Walbrecht's outside interests consist of bowling and she has taken a number of courses at UT evening school.

25 Years Since Alamogordo

Radiation Accident Experience

By T. A. LINCOLN, M.D.

At several medical meetings when introduced to colleagues, I have received this questionable compliment: "Having worked so long in the radiation industry, you must have had extensive experience dealing with radiation overexposures and injuries." When I tell them that in almost 20 years, I have seen only two cases of minor radiation injury, they seem amazed.

Similar comments have been made by friends and relatives who live far away from Oak Ridge. Apparently people outside the nuclear industry assume that many workers must routinely receive considerable radiation exposure in their work. They can't imagine a manufacturing or research plant where the workers are not exposed extensively to the process and the product.

Some readers may cynically consider my presentation

of some of the safety facts in the AEC as part of a planned counter-offensive to recent criticism of the AEC's handling of radiation safety. They should be assured that such is not the case.

It is well-known that the overall injury and fatality experience in the country-wide AEC operations has been good. Many safety awards have been won. The average annual frequency rate—the number of injuries per million man hours worked—has been about one-third of the National Safety Council's industry-wide rate since 1952 (roughly 2 versus 6) and has improved in the last three years (now about 1.5 versus 7). Even before 1950, when construction activities were greater, the AEC rate was less than one-half that of the National Safety Council.

A comparison of the severity rate—the number of days charged per million man hours worked—reveals a similar but not quite so dramatic difference. For example, since 1960, the National Safety Council rate has averaged about 7, while the AEC rate has been a little over 3.

Room for Interpretation

As people within the safety business know, the criteria established by the National Council for determining a lost-time injury leave room for interpretation. A sincere attempt is made to include injuries where there is a clear-cut association with a specific accident. In some cases, where the accident was minimal but the injury and disability severe, there is the problem of the influence of a pre-existing condition. In many back injuries, the victim may have had previous injuries, may have had an underlying instability, ruptured disc or arthritis before the work injury occurred. Most industries are reluctant to charge all the lost time for such injuries against their safety record.

Over the past 27 years, there have been only 38 radiation injuries in AEC and contractor facilities. Only about .4 percent of all lost-time injuries were due to radiation. During this time there have been 515,900,098 days of potential exposure, or an average of about 80,000 persons exposed to potential risk each year.

Of the 38 radiation injuries, there were 3 fatalities and 11 had overexposure but developed no symptoms. Here one might argue with the AEC's exclusion of the three fatalities which occurred at the S1-1 Reactor accident in Idaho in 1961. They were killed by the explosion but would have received fatal radiation exposures if they had sustained lesser injuries and could not have been immediately evacuated. These three need to be compared with the 94 fatalities from falls or falling objects and 41 from electrical shock. A total of 276 fatalities occurred during the period from 1943 to 1967. Sixty percent of them occurred in construction activities.

Since 1947 (through 1969), 99.87 percent of AEC and contractor employees received an annual dose of less than 5 rem (the permissible annual limit for adults 18 or over), and 94.13 percent received 1 rem or less. During this time, 1,795 employees have received 5 to 10 rem, 120 from 10 to 15 rem, and only 44 over 15 rem. The majority of exposures in excess of 5 rem resulted from specific accidents. During the past two years there have been only eight exposures over 5 rem,



Dr. Lincoln



SWIM MEET SET—Oak Ridge's Atomic City Aquatic Club (ACAC) is all set for its big annual swim meeting Saturday, August 15. Several Y-12 and Oak Ridge Gaseous Diffusion Plant parents are active in steering the successful event.

Brewster's Hot 462
Low Hi Power Count

Carl Brewster, Y-12, won the third match of the All Carbide High Power Rifle League with a 462 out of a possible 500. Close behind was Don Kiplinger, ORNL, with a 461.

Jack Mrocheck, also of ORNL, finished third with a 456.

Other scores were:

Firer	Score
Bill Galyon, Y-12	450 (7X)
Arvin Quist, ORNL	450 (7X)
Hugo Bertini, ORNL	448
A. A. Abbatiello, ORNL	445
Jim Brewer, ORGDP	430
Bert Searles, Y-12	423
Vic Fowler, ORNL	413
Joe Crowell, ORGDP	412
Larry Weston, ORNL	398
Bill Davy, Jr., ORNL	395
Dudley Hewette, ORNL	385
Charlie Harrison, ORNL	483 (4X)
Jimmy Bell, ORNL	383 (2X)
John DeLuca, ORNL	376
Dennis Chilcote, ORNL	358
Troy Burklow, Y-12	327

only one from 10 to 15 rem, and none over 15 rem.

Diagnostic X-rays

Many employees get far more radiation exposure from diagnostic X-ray studies of their kidneys, stomach, gallbladder or bowels than they do in their work. Admittedly, these are not whole body exposures, but they often involve vital viscera.

Since the first successful test of an atomic weapon in Alamogordo, N. M., on July 16, 1945, the atomic energy industry has had a remarkable safety record. It is a tribute to the many people who recognized the hazards and insisted that safety be a foremost consideration in all planning and in everyday operations. The preliminary evidence indicates that the private nuclear power industry intends to follow the example set by the AEC.

CRYOGENIC BRANDING

The red-hot iron used for years to brand animals may soon be a thing of the past. Tests at the Army's Edgewood Arsenal indicate that "freeze" branding can be substituted.

It's done with an iron cooled to minus 70 degrees centigrade. The animal suffers no pain, or after effects. The branded area is not spoiled for use as a hide. And, the animal's hair grows in white on the branded area, providing a high-contrast mark.

Atomic City Aquatic Club Swim Meet
Scheduled Saturday at Oak Ridge's Pool

Boys and girls in Oak Ridge's Atomic City Aquatic Club (ACAC) look forward each year to the Invitational Swim Meet held at the Oak Ridge Municipal Pool. Invitations are sent to AAU clubs throughout the section.

This year's meet is set for Saturday, August 15.

The competition has been held annually since 1954 with planning done by parents and interested Oak Ridgers. Nuclear Division sons and daughters have enjoyed the benefits of ACAC competitive swimming programs during this time.

Y-12 and ORGDP employees are on the meeting, steering and operating committees. They include: H. H. Stoner, Y-12, head judge; Warren Grunst, ORGDP, treasurer and purchasing; George Job, ORGDP, head referee; and Bert

Schappel, ORGDP, judging machine. In addition Mrs. Warren Grunst has taken over as meeting secretary; and Mrs. Hank Noritake (he is at ORGDP) is on the finance committee.

Jim Rowan, Y-12; Bob Ebel, ORGDP; Elwood Gift, AECOP; and Romeo Green, Y-12, are serving on the pool committee.

K-25 Colts Capture
Big Softball Crown

The K-25 Colts took possession of the Softball League crown easily last week! They downed the Y-12 Snakes two games, 6-4, and 14-11. In the final play-off between the All Stars, they also took both games 12-9, 10-4.

The All Stars had previously defeated the Eagles 14-4 and 17-2. In final standings, the Y-12 Eagles, K-25 Colts and Y-12 Snakes all stood high with 11 victories, two losses apiece. The All Stars and K-25 Gashouse Gang were tied for fourth place, which necessitated a play-off. The All Stars downed the Gang 11 to 7 on July 29.

Thus the play-off among the top four, for league championship.

Final standings follow:

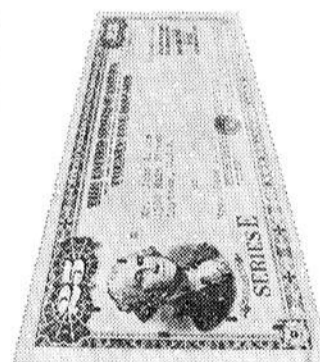
Team	W	L
K-25 Colts	15	2
Y-12 All Stars	13	5*
Eagles	13	2
Snakes	13	2
K-25 Gashouse Gang	10	4
Y-12 Rangers	8	5
K-25 Devils	7	6
Buccaneers, Y-12	7	6
Y-12 Bat Boys	5	8
9103 Braves, Y-12	4	9
N. C. Squad, Y-12	4	9
Beta 2 Miners	2	11
Raiders, Y-12	1	12
Y-12 Knockers	0	13

*Runners-up.

BURIED IN CUBA

The "indestructibility" of U. S. Savings Bonds crosses international boundaries. One person took a \$1,000 Bond with him to Cuba, in 1961. Since Government regulations made it illegal for him to hold the Bond, he buried it in the ground. When he left Cuba, he could not bring the Bond back. The Treasury deemed it unrecoverable and a new Bond was issued.

They mature
while you do.



Take stock in America
Buy U.S. Savings Bonds & Freedom Shares

We need your help!

Several months ago, the Carbide Courier and the Y-12 Bulletin were combined into a new publication — Nuclear Division News. Now we would like to get some ideas from you concerning this new publication.

Please take a few minutes to fill out the questionnaire. DON'T sign your name. Just make your comments, cut along the dotted line, and drop the questionnaire in any plant mail box.

Many thanks for your help.

CONFIDENTIAL SURVEY

(PLEASE DO NOT SIGN YOUR NAME)

1. Do you read NUCLEAR DIVISION NEWS? (Check one of following)

- ☐ All of it
☐ Most of it
☐ Parts of some articles
☐ I occasionally read an article
☐ I seldom read it

2. Do other members of your family read it? (Check appropriate boxes)

- ☐ Wife/husband regularly
☐ Wife/husband occasionally
☐ Child/children read it regularly
☐ Child/children seldom read it

3. Which phrase best describes NUCLEAR DIVISION NEWS?

- ☐ Management propaganda to employees
☐ Entertainment for employees
☐ Informative stories for employees
☐ Favorable stories about employees

4. I find NUCLEAR DIVISION NEWS

- ☐ Always interesting ☐ Almost always
☐ Usually ☐ Seldom ☐ Never

5. Generally, the following word best describes the job NUCLEAR DIVISION NEWS does in keeping me informed about plant affairs

- ☐ Excellent ☐ Good ☐ Fair ☐ Poor

6. As a means of providing information, I rate NUCLEAR DIVISION NEWS

- ☐ Excellent ☐ Good ☐ Fair ☐ Poor

7. The following are some of the types of news articles which appear in NUCLEAR DIVISION NEWS on a regular basis. Please check the appropriate boxes.

	Always Read	Almost Always Read	Seldom Read	Never Read
Plant safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human interest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee promotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company service anniversaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
News from retirees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports & recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plant accomplishments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dept. accomplishments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees in community service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unusual hobbies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calendar of events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefit plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporation news	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nuclear power developments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Honors to employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Which stories are of least interest to you? (Please list)

9. Please rate the readability of NUCLEAR DIVISION NEWS

- ☐ Easy to read and understand
☐ Boring
☐ Difficult
☐ Enjoyable

10. If you were the Editor of NUCLEAR DIVISION NEWS, what changes would you make?

11. Please feel free to give any additional comments you may have. (Use extra page if needed.)

12. The following is for information purposes. Please do NOT sign your name.

Age	Payroll	Company Service	Facility
<input type="checkbox"/> 18-25	<input type="checkbox"/> Hourly	<input type="checkbox"/> 1-10 years	<input type="checkbox"/> Y-12
<input type="checkbox"/> 25-40	<input type="checkbox"/> Weekly	<input type="checkbox"/> 10-20 years	<input type="checkbox"/> K-25
<input type="checkbox"/> Over 40	<input type="checkbox"/> Monthly	<input type="checkbox"/> Over 20 years	<input type="checkbox"/> X-10
			<input type="checkbox"/> Gen. staff
			<input type="checkbox"/> Retired
			<input type="checkbox"/> Other (please explain)

Please use PLANT MAIL and send to:
 NUCLEAR DIVISION NEWS
 Building 9704-2
 Room 173, Stop 20
 Y-12 Plant

AECOP's L. B. Aull Cited by U.S. Army

Lt. Col. Luther B. Aull 3rd, who recently retired from the U. S. Army and has joined the staff of Atomic Energy Commission Combined Operations (AECOP), has



been awarded a Meritorious Service Award. The award was in recognition of the fact that Aull "distinguished himself by outstanding meritorious service to the United States as Military Assistant to the Assistant Director (Nuclear Programs), Office of the Director of Defense Research and Engineering, from September, 1963 through June, 1970."

The citation added that Aull's "intimate knowledge and application of nuclear weapons design principles contributed significantly to the effectiveness of Department of Defense Programming for new weapons systems. His extremely perceptive and painstaking analyses of the requirements for nuclear test detection efforts of the United States and his insight into the sophisticated technology necessary to satisfy those requirements have contributed directly and significantly to better understanding of this very important effort. Colonel Aull consistently demonstrated outstanding professional competence, ingenuity and diplomacy in maintaining effective liaison with the Office of the Secretary of Defense, the military departments and the AEC."

A native of South Carolina, Aull received his bachelor's degree from the U. S. Military Academy, West Point, in 1950, and his Ph.D. in physics from the University of Virginia. He has been involved in the management of contract research and research and development aspects of nuclear weapons design. For three years prior to joining AECOP, he was assigned to the office of the Secretary of Defense.

In his new position, he will analyze AEC program objectives and relate them to research and development efforts. AECOP is a multi-company staff group administered by the Union Carbide Corporation.

Aull is married to the former Louise Fleming.



UNION CARBIDE CORPORATION

NUCLEAR DIVISION

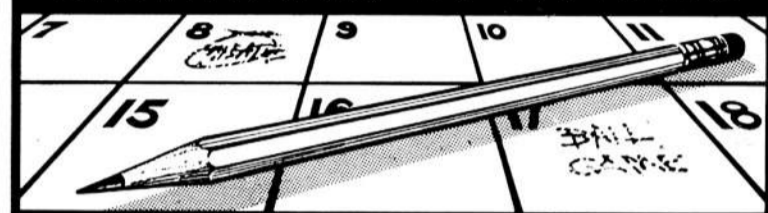
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CALENDAR OF EVENTS



COMMUNITY

August, 13, 18
 20, 25

Oak Ridge Community Playhouse Workshop. 7:30 to 10 p.m. Everyone welcome.

August 15

SWIM MEET: 8 a.m. Oak Ridge Municipal Pool. Sponsored by the Atomic City Aquatic Club.

August 16, 23

Oak Ridge Community Art Center Humanities Workshop. Ridge-wood Park, 1 to 4 p.m. (Weather permitting).

August 18

STAMP CLUB: 8 p.m. Wildcat Youth Center, Oak Ridge. Carl Baumann, member, will speak on "Match and Medicine Private Die Proprietary Stamps."

ASME Group Earns Full Section Status

The Oak Ridge Section of the American Society of Mechanical Engineers was recently awarded full section status after having existed as a subsection on the East Tennessee Section for several years. The new status provides the local group of engineers a greater voice in regional and national affairs of the Society and a more flexible attitude in planning local activities. Last year's chairman, Leland A. Haack, led the transition from subsection to section status.

Active planning for the 1970-71 year, the first full year as an independent section, has already begun. Officers are G. J. Kidd, chairman; J. K. Jones, program chairman; and C. A. Burchsted, educational chairman. Other section officers are Mario H. Fontana, vice chairman; I. K. Namba, secretary-treasurer; and Sylvan Cromer, Peter P. Holz and Leland A. Haack, executive committee members.

Runway De-Icer

Union Carbide has developed a de-icer to solve airport runway icing problems for the winter months. The proprietary formulation is called UCAR Runway De-Icer and is a specially-formulated corrosion-inhibited fluid composition designed for the de-icing and anti-icing of airport runways and taxi ways in sub-zero weather. It breaks the compacted snow and ice bond on the runway surface, making it easy to remove with conventional equipment. If applied before a snow or ice storm, the de-icer provides protection against snow or ice bonding to the runway surface. During tests at New York's LaGuardia Airport this past win-

TECHNICAL

August 13

Solid State Division Seminar: "Theory of Defects in Ionic Crystals," Marshall Stoneham, AERE, Harwell, England. Conference Room, Building 3025, ORNL, 10 a.m.

ORNL Environmental Study Luncheon Film Festival: "Population Ecology," "The Squeeze," and "All the Difference." Isotopes Auditorium, Building 3047, ORNL, 12 Noon. (You may bring your lunch.)

August 14

ORNL Environmental Study Workshop: "Personal Environmental Workshop," Vincent and Lil Giuliano. Regional Science Experience Center, Oak Ridge Turnpike, 7:30 p.m.

Physics Division Seminar: "Brueckner Theory and the Shell Model," R. L. Becker, ORNL Physics Division. East Auditorium Building 4500N, 3 p.m.

August 17

Health Physics Division & Atomic Molecular Processes Seminar: "Recent Studies of Unimolecular Decomposition and Charge Transfer Reaction of Negative Ions," Chava Lifshitz, Wright-Patterson Air Force Base. East Auditorium, Building 4500N, 10 a.m.

August 18

Molten-Salt Reactor Program Information Meeting: East Auditorium, Building 4500N, 9 a.m.

August 20

Nuclear Safety Program Seminar: "Waste Disposal in Underground Salt Formation," W. C. McClain. East Auditorium, Building 4500N, 9:15 a.m.

August 26

Metals and Ceramics Division Seminar: "Carbide Precipitation on Stacking Faults," C. E. Sessions. East Auditorium, Building 4500N, 2:45 p.m.

Uranium Shipment

(Continued from Page 1)

Under the "Lease and Sale" program, reactors in Illinois and in Switzerland received government-owned enriched uranium valued at approximately \$400,000.

The AEC's gaseous diffusion plants at Paducah, Ky., and Portsmouth, Ohio, are also involved in the uranium enrichment program.

ter, glazed ice and clinging snow were broken up and ready to be cleared away in about 20 minutes. In other tests, the new development proved effective at 1 degree F in Canada to break up compacted ice one-eighth inch thick and has proved equally effective in tests on snow and ice up to four inches deep.

This one will grow on you.



Take stock in America
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